

US EPA ARCHIVE DOCUMENT

**THE GREAT LAKES BINATIONAL TOXICS STRATEGY**

# **Great Lakes Binational Toxics Strategy Integration Workgroup Meeting**

**November 30, 2011  
EPA Region 5 Offices  
Chicago, Illinois**

THE GREAT LAKES BINATIONAL TOXICS STRATEGY

# Mercury

Work Group Co-Chairs:

Alexis Cain, USEPA

Alan Waffle, Environment Canada

# Canada's Mercury Reduction Challenge and Progress

## Challenge:

*“Achieve by 2000, a 90% reduction in the release of mercury, or where warranted the use of mercury, in the Great Lakes Basin”*

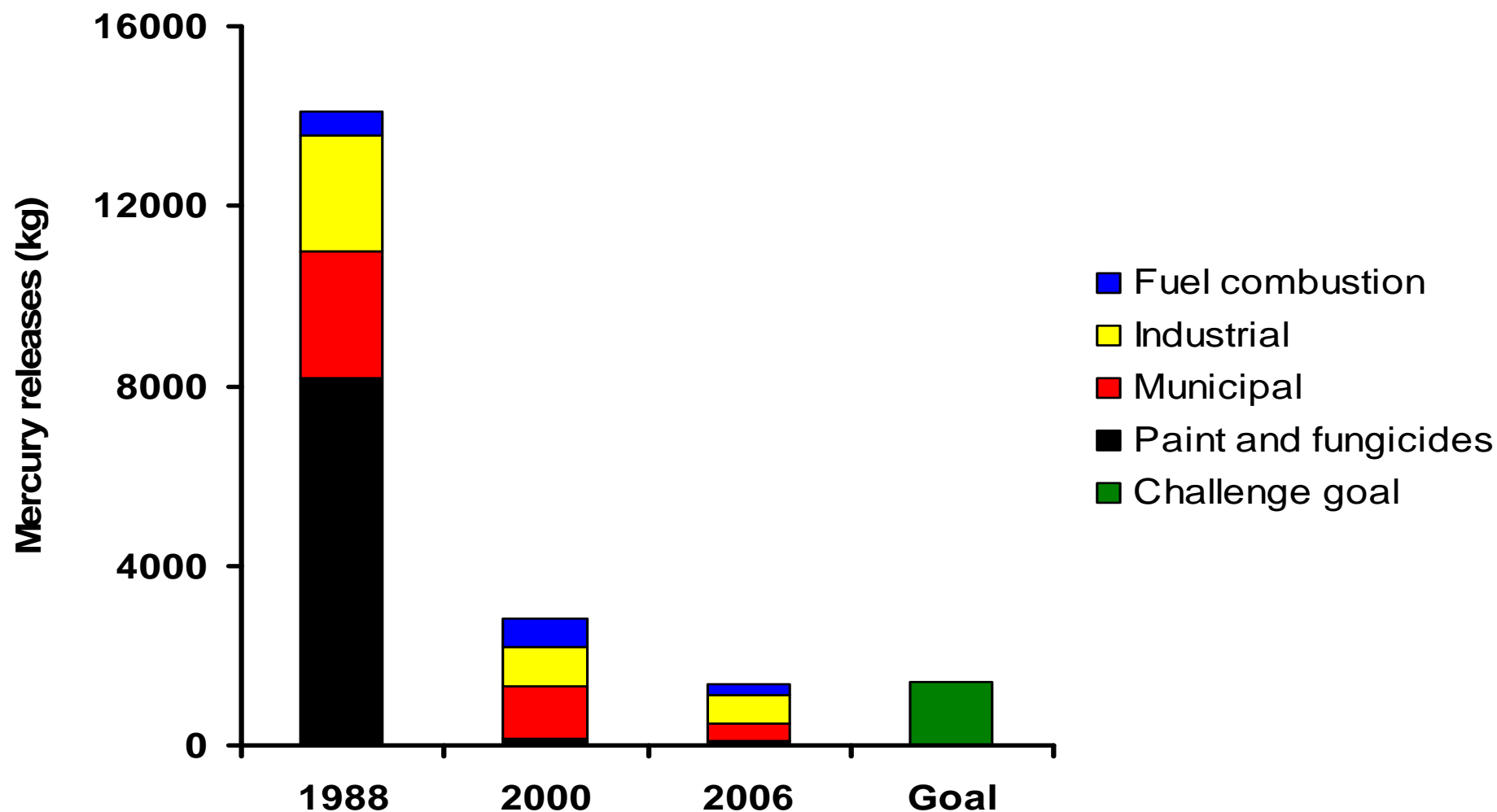
Baseline: 1988

## Progress:

- Reduction > 90%

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# Ontario Mercury Releases



# U.S. Mercury Reduction Challenge and Progress

## Challenge:

**“Achieve by 2006 a 50% reduction in use and air emissions of mercury nationwide”**

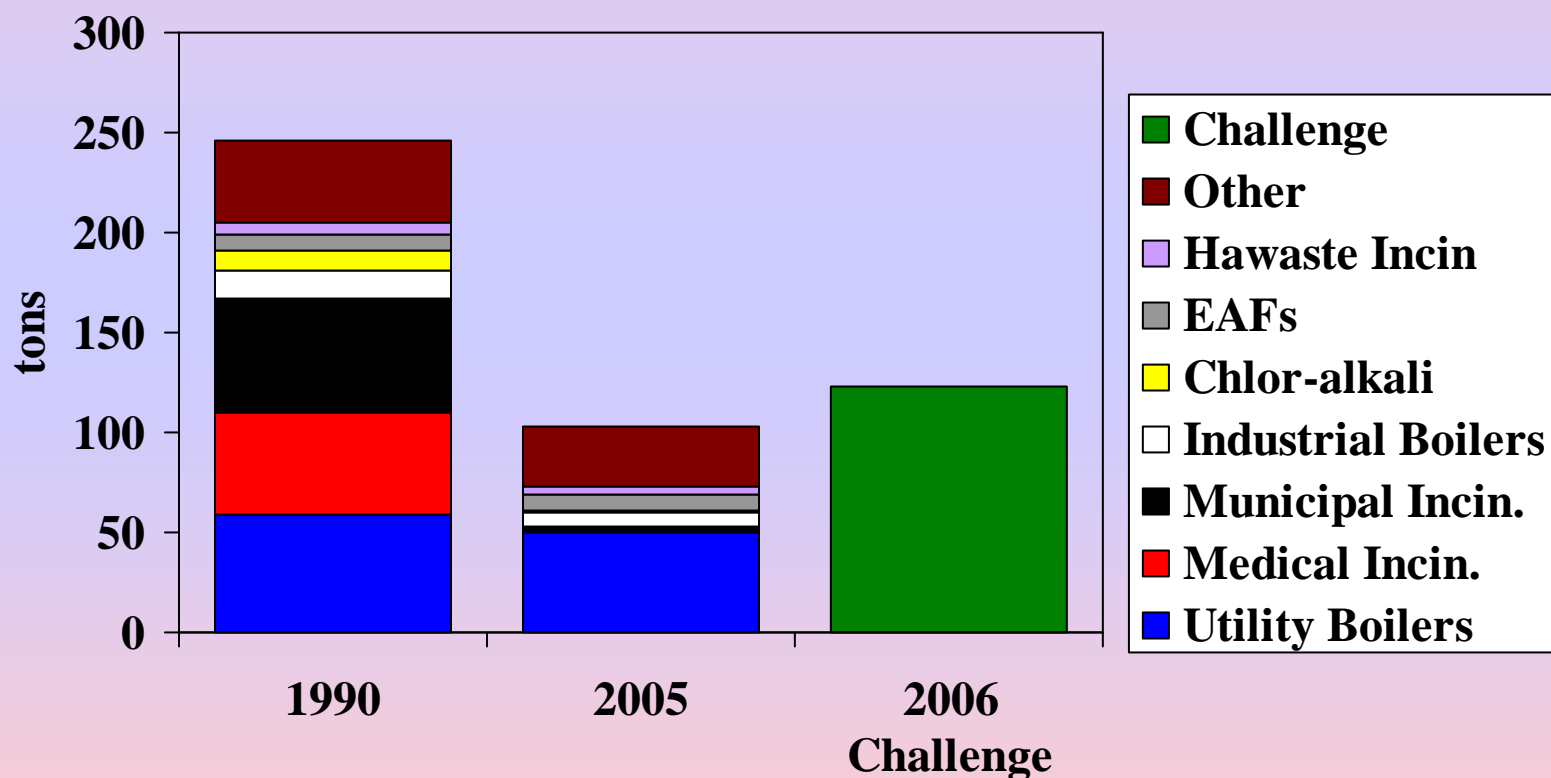
### ■ **Baselines:**

- ◆ **Emissions: 1990**
- ◆ **Use: 1995**

## Progress (best guess):

- **Emissions: > 50% reduction (through 2005)**
- **Use: > 50% reduction**

# U.S. Mercury Emissions



## Key Accomplishments

### ■ Voluntary Agreements

- ◆ Chlorine Institute Commitment to 50% reduction in chlor-alkali sector mercury use (actual reductions of 95%)
- ◆ American Hospital Association: Commitment to virtual elimination of mercury from hospital waste
- ◆ Northwest Indiana Steel Mills: Commitment to 80% reduction in mercury in equipment/inventory

### ■ Awareness Raising/Information Sharing

- ◆ Dental amalgam
- ◆ Auto switches
- ◆ Household mercury (thermometers)



## Great Lakes Regional Collaboration

- Two Strategies, featuring detailed recommendations for state action, with consensus by all eight state environmental agencies
  - ◆ Mercury in Products Phase-down Strategy (2008)
  - ◆ Mercury Emissions Reduction Strategy (2010)
- Implementation workgroups started for both Strategies
  - ◆ 1<sup>st</sup> progress report for Product Phase-down due 2012

## Great Lakes Mercury Connections

- *A community-based scientific effort that gathered and analyzed data to develop informational products addressing key questions regarding mercury in the Great Lakes region*
- *Funded by EPA's Great Lakes Air Deposition Program*
- *Principal Investigators: David Evers (Biodiversity Research Institute), Jim Wiener (University of Wisconsin-La Crosse)*
- *35 Papers Published in Ecotoxicology and Environmental Pollution*
- *Summary Report at <http://www.briloon.org/mercuryconnections/greatlakes>*

## Great Lakes Mercury Connections: Major Findings

- The Great Lakes Region is widely contaminated with mercury largely due to atmospheric emissions and deposition.
- The scope and intensity of the impact of mercury on fish and wildlife in the Great Lakes region are much greater than previously recognized. Mercury concentrations exceed human and ecological risk thresholds in many areas, particularly in inland waters.
- The northern Great Lakes region is particularly sensitive to mercury pollution. The impact of mercury emissions and deposition is exacerbated by watershed and lake characteristics in areas with abundant forests and wetlands that result in higher mercury inputs, transport, methylation, and uptake to elevated concentrations in aquatic food webs.
- Mercury levels in the environment of the Great Lakes region have declined over the last four decades, concurrent with decreased air emissions from regional and U.S. sources. After initial declines, however, concentrations of mercury in some fishes and birds from certain locations have increased in recent years—revealing how trajectories of mercury recovery can be complex.
- While the timing and magnitude of the response will vary, further controls on mercury emission sources are expected to lower mercury concentrations in the food web yielding multiple benefits to fish, wildlife, and people in the Great Lakes region. It is anticipated that improvements will be greatest for inland lakes and will be roughly proportional to declines in mercury deposition, which most closely track trends in regional and U.S. air emissions.

## Next Steps for Mercury

- **Mercury-containing products:** Canada is seeking to finalize regulations that prohibit manufacture, import, and sale of most mercury-containing products.
- **Controlling Mercury Emissions from Power Plants**
  - ♦ US regulations proposed. Final standard to be promulgated by December 16.
  - ♦ Canada-wide standards being implemented, including 2010 provincial caps and standards for new sources.
- **International Mercury Reduction Treaty**
  - ♦ 3 sessions of the Intergovernmental Negotiating Committee (INC-3) on mercury have taken place. Two more scheduled.
  - ♦ Will result in a treaty for signature by 2013